

REMARKS

In the Office Action the Examiner noted that claims 1-37 are pending in the application, and the Examiner rejected all claims. The Examiner's rejections are traversed below, and reconsideration of all rejected claims is respectfully requested.

The Examiner Has Not Addressed All Features Of Claim 15

In the Office Action the Examiner has not identified all of the features of claim 15 to be found in the prior art references. The Applicants respectfully submit that the Examiner has apparently considered claim 15 to have essentially the same features as claim 1. However, claim 15 is an independent claim and should be considered on the basis of its own features.

The Applicants stated in the Amendment filed on January 19, 2006 that the Examiner had yet to address the features of claim 15 in any of the issued Office Actions (pages 11 and 15-16), and the Examiner has again not addressed the claim 15 features in the current Office Action. Specifically, the Examiner has not identified or discussed at least the feature of claim 15 in which one of the boundaries of the first volume is "an exposed portion of a surface of the partition on the medium chamber side." Although this feature has not been identified or discussed by the Examiner in any of the issued Office Actions, the Examiner has continued to reject claim 15 under the same reasoning given for claim 1. To wit, on page 4 of the current Office Action, the Examiner recites features of the first volume of claim 1, and then attributes the same features to claim 15 while ignoring the "exposed portion of a surface of the partition on the medium chamber side" discussed above.

Therefore, the Applicants respectfully submit that any further Office Actions issued by the Examiner should not be made final until after the Examiner has made a proper rejection of claim 15, as the Examiner has not made a proper rejection of claim 15 thus far for this application. The Applicants have already replied to one Final Office Action, and none of the Office Actions have properly rejected claim 15. Specifically, the Applicants respectfully submit that any Office Action issued in response to this Response could not properly be made final.

Claim Rejections Under 35 USC §103

On pages 2-5 of the Office Action the Examiner rejected claims 1-37 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,623,092, issued to Kim et al. (hereinafter

referred to as "Kim"), in view of U.S. Patent No. 6,234,615, issued to Tsukuda (hereinafter referred to as "Tsukuda"). The Applicants respectfully traverse the Examiner's rejections of these claims.

Claim 1 of the present application recites "wherein a first volume is larger than a second volume, the first volume being defined by a first face forming an ink contact surface of the negative pressure generating medium adjacent the connection hole, a second face forming a bottom surface of the intermediate partition in the connecting hole, a third face forming a bottom of the ink cartridge, and a first vertical plane extending vertically from a center plane of the intermediate partition." The Applicants respectfully submit that at least this feature renders claim 1 patentable over the cited references.

The Examiner acknowledged that Kim does not disclose the feature of claim 1 recited above. However, the Examiner then apparently indicates that Kim does not disclose this feature merely because Kim "does not include a cut-out corner at the connecting hole (112) so that the medium (122) does not create a first volume and a second volume as claimed."

The Applicants respectfully submit that the lack of a cut-out corner on the sponge 122 adjacent to the clearance 112 of Kim is not the only deficient feature of the first volume recited in claim 1 of the present application. As stated in previous Responses, Kim does not disclose the first volume recited in claim 1 of the present application because the sponge 122 does not contact the bottom of the ink cartridge 100, and therefore the boundaries of the first volume recited in claim 1 of the present application are not disclosed. As is apparent from Figure 3 of Kim, because the sponge 122 does not contact the bottom of the ink cartridge 100, the boundaries of a similar volume would also include at the very least the ink supply pipe 132, and also probably the side of the filter 130 and a portion of the sponge 122 that is not adjacent to the clearance 112 (but is adjacent to the filter 130). Therefore, Kim apparently does not disclose or suggest a volume that is bounded so as to be located relatively adjacent to the clearance 112, such as the one recited in claim 1 of the present application.

The Examiner then noted that Tsukuda discloses a porous member 32 having a corner in a rounded shape at a connecting hole 30T. The Examiner also went on to state that the "rounded corner of the porous member creates a first volume and a second volume as claimed for providing a stable negative pressure immediately after a replenishing operation, see lines 40-45, column 9." The Examiner has apparently made this statement to lend support to the next paragraph, in which the Examiner stated that "It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make the corner of porous member

of Kim et al rounded as suggested by Tsukuda for the purpose of providing a stable negative pressure immediately after a replenishing operation. Note that the modified porous member with a rounded corner of Kim et al in view of Tsukuda would create the claimed first volume and the claimed second volume.” The Applicants respectfully submit that these comments by the Examiner are incorrect for several reasons, which are discussed below.

First, regarding the Examiner’s statement that one of ordinary skill in the art would incorporate the rounded corner of Tsukuda to the ink cartridge of Kim to provide a stable negative pressure immediately after a replenishing operation, the Applicants respectfully point out that the section of Tsukuda cited by the Examiner does not refer to the rounded corner of the porous member 32 at all. Column 9, Lines 38-44 of Tsukuda read thusly:

As described above, according to the construction of the present invention, since pressure balance between the first chamber 30A provided with the ink holding body and the second chamber 30B replenished with ink is not required to be adjusted after replenishing operation, almost stable negative pressure can be generated from immediately after the above series of liquid replenishing operation.

It is apparent from the Tsukuda disclosure that the rounded corner of the porous member 32 has nothing to do with the replenishing operation disclosed in Tsukuda, although the Examiner has apparently characterized the rounded corner as being integral to the process. In fact, the porous member 32 itself is merely an ink absorbing body that is typically found in ink cartridges, as would be recognized by anyone skilled in the art. Further, Kim does not disclose a replenishing operation in the ink cartridge 100. Therefore, as the rounded corner of the porous member 32 does not assist in the replenishing operation of Tsukuda, and further there is no replenishing operation performed in the ink cartridge 100 of Kim, there would be no motivation whatsoever to combine the two references.

Secondly, even if the two references were combined, the recited features of claim 1 would not be disclosed or suggested. The Examiner stated “that the modified porous member with a rounded corner of Kim et al in view of Tsukuda would create the claimed first volume.” However, as previously discussed, the sponge 122 of Kim does not create a volume boundary with the bottom of the ink cartridge as recited in claim 1 of the present application, so to give the sponge 122 a rounded corner adjacent to the clearance 112 would still not disclose the first volume recited in claim 1 of the present application. Rather, there would merely be a rounded corner that still does not form the boundaries recited in claim 1 of the present application.

Therefore, the combined references do not disclose or suggest all of the features of claim 1 of the present application. Further, even if the cited references did disclose all of the features of claim 1, there would be no motivation to combine the two references, as the rounded corner of Tsukuda has no bearing on the replenishing operation noted by the Examiner, the replenishing operation is not performed in Kim, and the rounded corner of the porous member would not even be practical with the ink cartridge of Kim, much less add any functionality. Thus, the Applicants respectfully submit that claim 1 of the present application patentably distinguishes over the cited references, and further respectfully request the withdrawal of the Examiner's §103 rejection of claim 1.

Claims 2-14 of the present application depend from claim 1 and include all of the features of that claim plus additional features which are not taught or suggested by the cited references. Therefore, it is respectfully submitted that claims 2-14 also patentably distinguish over the cited references.

Claim 15 of the present application recites a first volume of which one boundary is "an exposed portion of a surface of the partition on the medium chamber side." As discussed in the previous section of this Response, the Examiner has yet to identify this feature in any of the issued Office Actions. Further, this feature is not disclosed or suggested in either Kim or Tsukuda. There is apparently no exposed surface on the sponge 122 side of the partition 110 of Kim, likewise there is no exposed surface on the porous member 32 side of the partition 30W of Tsukuda. Therefore, it is not possible for the cited references, either alone or combination, to disclose or suggest at least this feature of claim 15. Thus, the Applicants respectfully submit that claim 15 patentably distinguishes over the cited references.

Claims 16-36 depend from claim 15 and include all of the features of that claim plus additional features which are not taught or suggested by the cited references. Therefore, it is respectfully submitted that claims 16-36 also patentably distinguish over the cited references.

Claim 37 of the present application recites "a surface of the negative pressure generating medium facing the connecting hole is provided at an inclined angle from the intermediate partition to a bottom surface of the second chamber to prevent blockage of the connecting hole." The Examiner acknowledged that this feature is not recited in either of the cited references, but stated that "a skilled artisan realizes that...the inclined wall can be rearranged as claimed for accommodating with the size and shape of a cartridge holder of a predetermined printing device in which the modified ink cartridge of Kim et al is to be used."

The Applicants respectfully traverse the Examiner's statement and respectfully request that the Examiner produce authority for this statement. The Applicants specifically point out the following errors in the Examiner's action.

First, the Examiner uses common knowledge evidence for the rejection. As explained in M.P.E.P. §2144.03,

any facts so noticed should... serve only to "fill in the gaps" in an insubstantial manner which might exist in the evidentiary showing made by the Examiner to support a particular ground for rejection. It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection is based.

Second, the noticed fact is not considered to be common knowledge or well-known in the art. In this case, the feature is not of notorious character or capable of instant and unquestionable demonstration as being well-known. Instead, this limitation is unique to the present invention (see, M.P.E.P. § 2144.03(A) (the notice of facts beyond the record which may be taken by the Examiner must be "capable of such instant and unquestionable demonstration as to defy dispute").

Third, there is no evidence supporting the Examiner's assertion (see, M.P.E.P. § 2144.03(B) ("there must be some form of evidence in the record to support an assertion of common knowledge").

Fourth, the Examiner appears to be basing the rejections, at least in part, on personal knowledge. The Examiner is required under 37 C.F.R. § 1.104(d)(2) to support such assertion with an affidavit when called for by the Applicant. The Examiner is called upon to support such assertion.

Also, the Examiner went on to state that lacking of showing any criticality, it would have been obvious to rearrange the declined wall of the ink cartridge for the purpose of accommodating with the size and shape of a predetermined holder. The Applicants respectfully submit that the recited feature of claim 37 is no simple design choice, and is not related to the accommodation of the size and shape of the holder. Rather, one aspect of this feature, as discussed in the present application, is to assist in providing a larger volume on the medium side of the ink cartridge. Therefore, the "criticality" discussed by the Examiner is apparent from the claim language.

The Applicants respectfully submit that the recited feature of claim 37 is not a simple matter that would simply be rearranged to accommodate the size and shape of a cartridge

holder, as characterized by the Examiner, and further is neither disclosed nor suggested by any of the references cited by the Examiner. Therefore, the Applicants respectfully submit that claim 37 also patentably distinguishes over the cited references.

Summary

There being no further outstanding objections or rejections, it is respectfully submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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